## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

**COMPLETE LISTING OF CLAIMS**:

Claims 1-47 : (Canceled)

Claim 48 : (New) A method of producing green light signals, comprising the steps of:

a) coupling pump signals from at least one pump source into at least one erbium doped fiber (EDF) to cause ground state absorption (GSA) and excited state absorption (ESA) in erbium ions of the EDF, for producing the green light signals; and

b) a majority of the pump signals having a wavelength at which a probability of occurrence of ESA in the EDF is greater than a probability of occurrence of GSA in the EDF.

Claim 49 : (New) The method according to claim 48, in which 60% of the pump signals have a wavelength at which the probability of occurrence of ESA in the EDF is greater than the probability of occurrence of GSA in the EDF.

Claim 50 : (New) The method according to claim 48, in which the majority of the pump signals have a wavelength in a range between approximately 920nm and approximately 980 nm.

Claim 51 : (New) The method according to claim 50, in which the majority of the pump signals have a wavelength in a region of 960nm.

Claim 52 : (New) The method according to claim 48, in which the majority of the pump signals have a wavelength less than a crossover wavelength of an EDF GSA and ESA cross section peaks crossover point.

Claim 53 : (New) The method according to claim 48, in which the at least one pump source is coupled to the EDF such that the pump signals are coupled into the EDF to propagate therealong in a first direction.

Claim 54 : (New) The method according to claim 53, in which another pump source is coupled to the EDF such that the pump signals are coupled into the EDF to propagate therealong in a second direction, opposite to the first direction.

Claim 55 : (New) The method according to claim 48, and reflecting at least some of the pump signals escaping from the at least one EDF back therein.

Claim 56 : (New) The method according to claim 55, in which the reflecting step comprises placing a pump signal reflector at one of a first end and a second end of the at least one EDF.

Claim 57 : (New) A device for producing green light signals, comprising:

a) at least one erbium doped fiber (EDF) coupled to at least one pump source to receive pump signals therefrom for causing ground state absorption (GSA)and excited state absorption (ESA) in erbium ions of the EDF, to produce the green light signals; and

b) a majority of the pump signals having a wavelength at which a probability of occurrence of ESA in the EDF is greater than a probability of occurrence of GSA in the EDF.

Claim 58 : (New) A method of amplification of traffic-carrying signals in an erbium doped fiber amplifier (EDFA), comprising the steps of:

a) coupling pump signals from at least one pump source into at least one erbium doped fiber (EDF) to cause ground state absorption (GSA) and excited state absorption (ESA) in erbium ions of the EDF, for producing green light signals; and

b) a majority of the pump signals having a wavelength at which a probability of occurrence of ESA in the EDF is greater than a probability of occurrence of GSA in the EDF.

Claim 59 : (New) The method according to claim 58, in which the green light signals are produced substantially externally to the EDFA, and are coupled into the EDFA.

Claim 60 : (New) The method according to claim 59, in which the green light signals are produced using at least one device coupled to the EDFA.

Claim 61 : (New) The method according to claim 60, in which the at least one device is coupled to one of a first end and a second end of the EDFA.

Claim 62 : (New) The method according to claim 60, in which the EDFA comprises at least one EDF, and at least one device is coupled to the at least one EDF.

Claim 63 : (New) The method according to claim 62, in which the at least one device is a co-directional device in which the green light signals are coupled into the EDF to propagate therealong in a same direction as the traffic-carrying signals.

Claim 64 : (New) The method according to claim 63, in which a counter-directional device is coupled to the EDF so that the green light signals are coupled into the EDF to propagate therealong in an opposite direction to that of the traffic-carrying signals.

Claim 65 : (New) The method according to claim 63, in which the green light signals are produced substantially within the EDFA.

Claim 66 : (New) The method according to claim 65, in which the green light signals are produced substantially within the EDFA by pumping the EDFA with at least one pump source coupled to the EDFA, the majority of the pump signals having a wavelength at which the probability of occurrence of ESA in the EDFA is greater than the probability of occurrence of GSA in the EDFA.

Claim 67 : (New) The method according to claim 66, in which 60% of the pump signals have a wavelength at which the probability of occurrence of ESA in the EDFA is greater than the probability of occurrence of GSA in the EDFA.

Claim 68 : (New) The method according to claim 66, in which the majority of the pump signals have a wavelength in a range between approximately 920nm and approximately 980nm.

Claim 69 : (New) The method according to claim 68, in which the majority of the pump signals have a wavelength in a region of 960nm.

Claim 70 : (New) The method according to claim 66, in which the at least one pump source is coupled to one of a first end and a second end of the EDFA.

Claim 71 : (New) The method according to claim 66, in which the EDFA comprises at least one EDF, and at least one pump source coupled to the at least one EDF.

Claim 72 : (New) The method according to claim 71, in which a co-directional pump source is coupled to the at least one EDF so that the pump signals are coupled into the at least one EDF to propagate therealong in a same direction as that of the traffic-carrying signals.

Claim 73 : (New) The method according to claim 72, in which a counter-directional pump source is coupled to the at least one EDF so that the pump signals are coupled into the at least one EDF to propagate therealong in an opposite direction to that of the traffic-carrying signals.

Claim 74 : (New) The method according to claim 58, and the step of reflecting at least some of the pump signals escaping from the EDFA back into the EDFA.

Claim 75 : (New) The method according to claim 74, in which the reflecting step comprises placing a pump signal reflector at one of a first end and a second end of the EDFA.

Claim 76 : (New) The method according to claim 74, in which the EDFA comprises at least one EDF, and the reflecting step comprises placing a pump signal reflector at one of a first end and a second end of the at least one EDF.

Claim 77 : (New) The method according to claim 75, in which the pump signal reflector reflects the pump signals having a wavelength in a range between approximately 920nm and approximately 980nm.

Claim 78 : (New) The method according to claim 58, and the step of reflecting at least some of the green light signals escaping from the EDFA back into the EDFA.

Claim 79 : (New) The method according to claim 78, in which the reflecting step comprises placing a green light signal reflector at one of a first end and a second end of the EDFA.

Claim 80 : (New) The method according to claim 78, in which the EDFA comprises at least one EDF, and the reflecting step comprises placing a green light signal reflector at one of a first end and a second end of the at least one EDF.

Claim 81 : (New) The method according to claim 58, and the step of substantially preventing the green light signals from being transmitted from the EDFA.

Claim 82 : (New) The method according to claim 81, in which the preventing step comprises placing a green light signal reflector at one of an input end and an output end of the EDFA.

Claim 83 : (New) An erbium doped fiber amplifier (EDFA) for amplifying traffic-carrying signals, comprising:

a) at least one erbium doped fiber (EDF) coupled to at least one pump source to receive pump signals therefrom for causing ground state absorption (GSA) and excited state absorption (ESA) in erbium ions of the EDF, to produce green light signals; and

b) a majority of the pump signals having a wavelength at which a probability of occurrence of ESA in the EDF is greater than a probability of occurrence of GSA in the EDF.

Claim 84 : (New) A laser for producing green light signals, comprising:

a) at least one erbium doped fiber (EDF) coupled to at least one pump source to receive pump signals therefrom to cause ground state absorption (GSA) and excited state absorption (ESA) in erbium ions of the EDF, for producing the green light signals; and

b) a majority of the pump signals having a wavelength at which a probability of occurrence of ESA in the EDF is greater than a probability of occurrence of GSA in the EDF.

Claim 85 : (New) The laser according to claim 84, in which 60% of the pump signals have a wavelength at which the probability of occurrence of ESA in the EDF is greater than the probability of occurrence of GSA in the EDF.

Claim 86 : (New) The laser according to claim 84, in which the majority of the pump signals have a wavelength in a range between approximately 920nm and approximately 980nm.

Claim 87 : (New) The laser according to claim 86, in which the majority of the pump signals have a wavelength in a region of 960nm.

Claim 88 : (New) The laser according to claim 84, in which the at least one pump source is coupled to the EDF such that the pump signals are coupled into the EDF to propagate therealong in a first direction.

Claim 89 : (New) The laser according to claim 88, in which the at least one pump source is coupled to the EDF such that the pump signals are coupled into the EDF to propagate therealong in a second direction, opposite to the first direction.

Claim 90 : (New) The laser according to claim 84, and means for reflecting at least some of the pump signals escaping from the laser back into the laser.

Claim 91 : (New) The laser according to claim 90, in which a pump signal reflector is placed at one of a first end and a second end of the laser.

Claim 92 : (New) The laser according to claim 90, and a pump signal reflector is placed at one of a first end and a second end of the at least one EDF.

Claim 93 : (New) The laser according to claim 84, in which a size of the laser is 50 mm x 50 mm x 20 mm.